| <br>, Index of Claims | Application/Control No. | Applicant(s)/Patent under<br>Reexamination |
|-----------------------|-------------------------|--|
|                       | 10/647,520              | CHOI ET AL.                                |
|                       | Examiner                | Art Unit                                   |
| <br>                  | Edgardo San Martin      | 2837                                       |
|                       |                         |  |
| √ Rejected _ (Through |                         | Appeal                                     |

| Rejected | _ | (Through numeral)<br>Cancelled | N | Non-Elected  | A | Appeal   |
|----------|---|--------------------------------|---|--------------|---|----------|
| Allowed  | + | Restricted                     | 1 | Interference | 0 | Objected |

| · Cla    | aim_     |          |          |          |  | Dat  | be   |                 |                 |          | ] | CI   | alm      | Τ        | _        |          | - (      | Date     | ,        | _        | _      | ٦        | CI   | aim        |          |         |          | Da | te |  |          |          |
|----------|----------|----------|----------|----------|--|--|--|-----------------|-----------------|----------|---|--|----------|----------|----------|----------|----------|----------|----------|----------|--------|----------|--|------------|----------|---------|----------|----|----|--|----------|----------|
|          | =        | I.,      | Г        | Г        | Г  | Т  | Г  |                 | Г               | Γ        | 1 |  | =        | Т        | Г        | П        | Π        | П        | П        | Т        | Т      | 7        |  |            | T        | Т       | Т        | Т  | 1  | T                                      | Т        | T        |
| Final    | Original | 8/22/05  |          |          | l  | ı  |  |                 |                 | ı        | ı | Final  | Original | ı        |          |          |          |          |          | I        | 1      |          | Final  | Original   | ĺĺ       | -       |          | 1  |    | 1                                      | 1        |          |
| 這        | ٦        | Ŝ        |          | l        | l  | ı  |  |                 |                 | ı        |   | i  | 쭕        | 1        |          | İ        | 1        | 1 1      | - 1      | - 1      | 1      | 1        | 证  | 물          |          | - 1     |          | 1. |    |  | 1        |          |
|          |          | ۱۳       |          |          |  | 1  |  |                 | 1               | ı        | 1 | 1  | 0        | 1        | ı        |          | l        | 1 1      | - 1      |          | 1      |          | 1  | 0          |          | -1      |          | 1  |    |  |          | 1        |
|          | (1)      | V        | Г        | Г        |  | Т  | T  | Т               | Т               | Г        | 1 |  | 51       | 1        | T        | T        | П        | П        | ┪        | $\neg$   | 十      | 7        |  | 101        |          | 7       | 十        | 十  | +  | ╈                                      | †        | ╈        |
|          | 2        | Π        | Г        | Г        | Г  | Т  | 1  | Τ               | 1               | Г        | 1 |  | 52       | Т        | Т        | T        |          | П        | ┪        | $\neg$   | 十      | 7        |  | 102        | $\top$   | 7       | 十        | +  | ╅  | 十                                      | +        | $\vdash$ |
|          | 3        | П        | Г        | Г        | T  | Т  | T  | T               | T               | Г        | 1 |  | 53       | 1        | Τ.       | $\vdash$ | 1        | $\Box$   | ┪        | 7        | ✝      | 1        |  | 103        | $\neg +$ | +       | _        | 十  | ╅  | +-                                     | +        | +        |
|          | 4        | H        | T        | Г        | Г  | Т  | 1  | T               | T               | t        | 1 | $\vdash$   | 54       | Т        | 1-       | Т        | Н        | Н        | ┪        | 十        | ╅      | ┫        |  | 104        | _        | 7       | 十        | ╅  | ╁  | +                                      | +        | +        |
|          | 5        | 11       | Г        |          | T  | Т  | T  |                 |                 | T        | 1 |  | 55       | T        | 1-       | 1        | ┢        | М        | _        | 十        | ╅      | 1        |  | 105        | -        | ╅       | +        | ╅  | +  | ╅                                      | ╁╴       | 1        |
|          | 6        | 11       | 1        | T        | ✝  | t  | ✝  | t−              | $\vdash$        | t        | 1 |  | 56       | t        | T        | $\vdash$ | ┢        | Н        | 7        | $^{+}$   | 十      | ヿ        |  | 106        | $\dashv$ | 十       | +        | ╅  | ╅  | +                                      | +-       | +-       |
|          | 7        | 1        | Г        | Г        | T  | T  | Т  | T               | T               |          | 1 |  | 57       | ✝        | ✝        | ⇈        | ┢        | М        | 寸        | 7        | +      | ┪ .      |  | 107        | -        | +       | +        | ╅  | +  | ╈                                      | +        | 1        |
|          | 8        | I        | $\vdash$ | Г        | 1  | T  | ✝  | T               | T               | Г        | 1 | $\vdash$   | 58       | Т        | 1        | $\vdash$ | Ι.       | Н        | 7        | +        | $\top$ | 7        |  | 108        | -        | +       | 十        | +  | +  | ╅                                      | +        | +        |
|          | 9        | ⇈        | <u> </u> | _        | Т  | Т  | 1  | 1               | T               | T        | 1 |  | 59       | f        | ┪        | $\vdash$ |          | Н        | 7        | $\dashv$ | +      | ┥        | -  | 109        | -        | ╅       | +        | +  | ╈  | +-                                     | +        | ╁        |
|          | 10       | 1        | ┢        | Ι-       | Т  | ┪  | 1  | 1               | 1               | Т        | 1 | $\vdash$   | 60       | T        | $\vdash$ | 1        |          |          | 7        | _        | ╁      | 1        |  | 110        |          | ╅       | $\dashv$ | +  | ┿  | ┿                                      | ╁        | ╁        |
|          | 11       | H        | Т        | Г        | Т  | T  | 1  | t               | 1               | Т        | 1 |  | 61       | t        | 1        | H        | Н        | Н        | $\dashv$ | +        | +      | 1        | <b>—</b>   | 111        | $\dashv$ | +       | ╁        | +  | ╁╴ | +-                                     | +        | +-       |
|          | 12       | Н        | Н        |          | Н  | ┰  | t  | $t^-$           |                 | Н        | 1 | $\vdash$   | 62       | †        | H        | $\vdash$ |          | $\vdash$ | $\dashv$ | +        | +      | 1        | $\vdash$   | 112        | $\dashv$ | +       | +        | +  | +  | +                                      | +        | +-       |
|          | (13)     | H        | $\vdash$ | Н        | <del>                                     </del> | t  | 1  | $\vdash$        | Н               | $\vdash$ | 1 | $\vdash$   | 63       | t        | 1-       | $\vdash$ | $\vdash$ | $\vdash$ | +        | +        | +      | 1        | $\vdash$   | 113        | -+       | +       | +        | +  | +  | +                                      | ┿        | ╁        |
|          | 14       | H        | Н        |          | Н  | ┢  | t  | T               |                 | Н        | 1 |  | 64       | 1        | H        | $\vdash$ | -        | $\vdash$ | $\dashv$ | +        | +      | ┨        | $\vdash$   | 114        | +        | +       | +        | ╫  | ╈  | +                                      | ╁        | +        |
|          | 15       | H        |          | $\vdash$ | ┢  | H  | †  | T               | $\vdash$        | $\vdash$ |   | <b>-</b>   | 65       | $\vdash$ | $\vdash$ | $\vdash$ | $\vdash$ | $\vdash$ | $\dashv$ | +        | +      | -        | <b>—</b>   | 115        | -+-      | +       | +        | +  | +  | +-                                     | ╁        | +        |
| _        | 16       | H        |          | _        | ⊢  | H  | ✝  | 1               | Н               | H        | l | $\vdash$   | 66       | t        | $\vdash$ | $\vdash$ | $\vdash$ | Н        | $\dashv$ | +        | +      | 1        | $\vdash$   | 116        | +        | +       | +        | ╁  | ┿  | ╁╴                                     | ╁        | ╁        |
|          | 17       | +        |          |          | <del> </del>                                     | <del>                                     </del> | <del>                                     </del> | $\vdash$        | $\vdash$        | $\vdash$ | l | $\vdash$   | 67       | 1        | $\vdash$ | $\vdash$ | Н        | $\dashv$ | $\dashv$ | +        | +      | ┨        | $\vdash$   | 117        | +        | +       | +        | +  | ╁  | +                                      | +        | $\vdash$ |
|          | 18       | +        |          |          | ┝  | t  | +  | $\vdash$        | Н               | $\vdash$ |   | <b> </b>   | 68       | 1-       | $\vdash$ | H        | Н        | $\vdash$ | $\dashv$ | +        | ╁      | ┨        | -  | 118        | +        | ╁       | +        | +  | ╁  | +                                      | +        | ╁        |
| _        | 19       | H        | Н        | -        | $\vdash$   | ⊢  | $\vdash$   | Н               | Н               | Н        |   | <b>—</b>   | 69       | ├-       | ├-       | ┢        |          | -        | +        | +        | ┿      | -        |  | 119        | +        | +       | ┿        | +  | ╁  | +-                                     | ┿        | ╀        |
| _        | 20       | $\vdash$ | -        | $\vdash$ | $\vdash$   | ┢  | ╁  | Н               | Н               | -        |   | _  | 70       | ╁╌       | ⊢        | -        | Н        | $\dashv$ | +        | ╅        | ╁      | 4        | -  | 120        | $\dashv$ | ┿       | +        | ╁  | ╀  | ╫                                      | ╀        | ⊢        |
|          | (21)     | 1        | H        | -        | _  | ⊢  | ╁  | ╁               | Н               | H        |   | H  | 71       | ┢        | ┢        | ┝        | Н        | $\dashv$ | +        | ╅        | ┿      | ┨        | -  | 121        | +        | +       | ╬        | +  | ╁  | ╫                                      | ┿        | ╀        |
|          | 22       | ř        | $\vdash$ | -        | _  | ⊢  | ╁╴   | -               | Н               | $\vdash$ |   | $\vdash$   | 72       | ⊢        | ⊢        | ⊢        | $\vdash$ | -        | +        | +        | ┿      | -        | $\vdash$   | 122        | $\dashv$ | +       | ╫        | ┿  | ┿  | ┿                                      | ╂        | ┼        |
|          | 23       |          | $\vdash$ | -        | _  | ⊢  | ┢  | $\vdash$        | H               | $\vdash$ |   | $\vdash$   | 73       | ╁        | -        | ⊢        | Н        | -        | +        |          | ╁      | ┥        |  | 123        |          | ┰       | ╅        | ╁  | ╀  | ╁                                      | ╀        | ┼        |
| _        | 24       |          | Н        | $\vdash$ |  | ┝  | ┢┈   | ┢               | Н               |          |   | $\vdash$   | 74       | ┢        | ┢        | ┝        | Н        | $\dashv$ | ┿        | +        | +-     | 4        |  | 124        | -+       | ╫       | ┿        | ╫  | ┿  | +-                                     | ╫        | -        |
| -        | 25       |          | Н        |          | ├  | ┢  | ┢  | ┢               | Н               | Н        |   | $\vdash$   | 75       | ⊢        | Н        | $\vdash$ | Н        | $\dashv$ | +        |          | ╂      | ┨        |  | 125        | +        | ╫       | +        | ╀  | ╁  | ╁                                      | ╀        | -        |
|          | 26       | -        | Н        | _        | _  | Н  | ╁  | -               | Н               | Н        |   | -  | 76       | ╁╌       | Н        | $\vdash$ | Н        | -        | $\dashv$ | +        | ┿      | ┥        | $\vdash$   | 126        | +        | +       | +-       | ╁  | ╁  | ┿                                      | ┿        | -        |
|          | 27       |          | Н        |          |  | _  | -  |                 | $\vdash$        | Н        |   |  | 77       | ┝        | Н        | Н        | Н        | -        | +        | +        | ┿      | -        | <b>—</b>   | 127        | $\dashv$ | ┿       | +        | ┿  | ┿  | +-                                     | ┿        | ⊢        |
| -        | 28       |          | Н        | _        | $\vdash$   | H  | ├-   |                 | $\vdash$        | Н        |   | -  | 78       | -        | $\vdash$ | Н        | Н        | +        | +        | ┰        | ╁      | ┨ .      | $\vdash$   | 128        | -        | ┿       | ┽        | ╁  | ╁  | ╫                                      | +-       | $\vdash$ |
|          | 29       | _        | $\vdash$ | -        | _  | ⊢  | ┢  | Н               | Н               | Н        |   | <del>                                     </del> | 79       | ┝        | $\vdash$ | -        | Н        | -        | ┿        | +        | ┿      | ┨        | -  | 129        | +        | ┿       | ┿        | ┿  | ┿  | ╀                                      | ╁┈       | ┝        |
| -        | 30       | _        | Н        | -        |  | Н  | ⊢  | Н               | Н               | Н        |   | -  | 80       | ┝        | $\vdash$ |          | Н        | $\dashv$ | +        |          | ┿      | 4        | $\vdash$   | 130        | -        | ╁       | +-       | ╁  | ╀  | ╄                                      | ╂        | -        |
| -        | 31       | -        | Н        |          | _  | ┝  | ⊢  | Н               | Н               | $\vdash$ |   | $\vdash$   | 81       | ⊢        | -        | H        |          | $\dashv$ | +        | +        |        | -{       | $\vdash$   |            | +        | ╁       | ┿        | +- | ╀  | ╀                                      | ╀        | ⊢        |
|          | 32       |          |          | $\dashv$ | _  | ┰  |  | H               | Н               | $\dashv$ |   | -  | 82       | $\vdash$ | $\vdash$ | $\vdash$ | Н        | $\dashv$ | +        | +        | +      | ┨        | -  | 131<br>132 | -        | +       | +        | +  | ╀  | +-                                     | +        | $\vdash$ |
| -        | 33       | -        | $\vdash$ | -        | -  | ├─   | Н  | Н               | ┝┥              |          |   | <u> </u>   | 83       | $\vdash$ | H        |          | $\vdash$ | +        | ┰        | ┿        | ╫      | $\dashv$ | $\vdash\vdash$                                   | 133        | +        | +       | +        | ╂╌ | ╀  | +-                                     | ⊢        | $\vdash$ |
| $\dashv$ | 34       | $\dashv$ | $\dashv$ | $\dashv$ | -  | $\vdash$   | $\vdash$   | $\vdash$        | Н               | $\vdash$ |   | <b>-</b>   | 84       | -        | Н        | Н        | $\vdash$ | $\dashv$ | +        | +        | +      | Η .      | Н  | 134        | -        | ┿       | +        | +  | +  | +-                                     | +        | Н        |
| $\dashv$ | 35       | =        | $\dashv$ | $\dashv$ |  | $\vdash$   | $\vdash$   | Н               | ┝╌┪             |          |   | $\vdash$   | 85       | -        | Н        | Н        | $\vdash$ | $\dashv$ | +        | +        | +      | $\dashv$ | $\vdash$   | 135        | +        | +       | +-       | +- | ╁  | ╀                                      | ╁        | $\vdash$ |
| -        | 36       | $\dashv$ | $\vdash$ |          | _  | ┢  | $\vdash$   | H               | Н               | -        |   |  | 86       | $\vdash$ | Н        | Н        | $\dashv$ | -+       | ╅        | +        | +      | ┨        | $\vdash\vdash$                                   | 136        | -+-      | +       | +        | ╁  | +- | +                                      | ┼        | $\vdash$ |
| $\dashv$ | 37       | -        | $\dashv$ | $\dashv$ |  | $\vdash$   | -  | Н               | Н               | -        |   | $\vdash\vdash$                                   | 87       | $\vdash$ | Н        | $\vdash$ | -        | $\dashv$ | +        | +        | +      | ┨        | $\vdash\vdash\vdash$                             | 137        | +        | +       | +        | +  | ╀  | ╁                                      | $\vdash$ | Н        |
| $\dashv$ | 38       | $\dashv$ | $\dashv$ | $\dashv$ |  | $\vdash$   | $\vdash$   | $\vdash$        | Н               | $\dashv$ |   |  | 88       | Н        | Н        | Н        | $\dashv$ | +        | +        | +        | ╁      | ┨        | $\vdash\vdash$                                   | 138        | +        | ┿       | +        | ╁  | ╀  | ╁                                      | -        | $\vdash$ |
|          | 39       | -        |          |          | -  | $\vdash$   | $\vdash$   | Н               | Н               | $\dashv$ |   |  | 89       | $\vdash$ | Н        | $\dashv$ | $\dashv$ | +        |          | +        | +-     | 4        | $\vdash\vdash$                                   |            | +        | ╁       | +        | ╀  | ╄  | ╀                                      | ⊢        | Н        |
| -        | 40       | -        | $\dashv$ | -        |  | -  | Н  | Н               | Н               | $\dashv$ |   |  | 90       | $\vdash$ | Н        | $\dashv$ | $\dashv$ | -        | +        | +-       | +      | ┨        | $\vdash\vdash$                                   | 139<br>140 | +        | +       | +        | +  | ╁  | ╀                                      | ⊢        | Н        |
|          | 41       | $\dashv$ | $\dashv$ | $\dashv$ |  | $\vdash$   | Н  | $\vdash$        | $\vdash$        | ᅱ        |   | <b> </b>   | 91       | Н        | Н        | $\dashv$ | $\dashv$ | $\dashv$ | +        | ╬        | +      | ┨        | $\vdash\vdash\vdash$                             |            | +        | +       | +        | ╁  | -  | ╂                                      | ⊢        | $\vdash$ |
|          | 42       |          |          | $\dashv$ | -  |  | Н  | $\vdash$        | $\vdash \vdash$ | ᅴ        |   | $\vdash\vdash$                                   |          | $\vdash$ | $\vdash$ |          | -1       | +        | +        | +        | ╁      | ┥        | $\vdash$   | 141        | +        | +       | +        | ╀  | ╀  | $\vdash$                               | Н        | Н        |
|          | 43       | ⊣        |          |          |  | -  | Н  | Н               | $\vdash$        | $\dashv$ |   | $\vdash$   | 92       | Н        | Н        | -        | -        | $\dashv$ | +        | +        | +      | 4        | $oldsymbol{oldsymbol{\sqcup}}$                   | 142        | -        | +       | +        | +  | ╂  | -                                      | -        | Н        |
| -1       |          | $\dashv$ |          |          | -  |  | $\vdash$   | ⊦⊣              | $\vdash$        |          |   | $\vdash\vdash$                                   | 93       | Н        | $\vdash$ | $\dashv$ | $\dashv$ | +        | +        | +        | +      | 4        | $\vdash$   | 143        | +        | +-      | +        | ╀  | ╄  | ╄-                                     | ١.,      | Н        |
| -        | 44       | -        |          | -        | -  | _  | Н  | Н               | $\vdash$        | $\dashv$ |   | $\vdash \vdash$                                  | 94       | Н        | $\vdash$ |          | -        | +        | 4        | +        | +      | ┨        | <del>                                     </del> | 144        | -        | +       | +        | +  | ╄  | ₩                                      |          | Щ        |
|          | 45       | ᅱ        | -        | ┥        | -  |  | Н  | Н               | $\vdash \vdash$ | 4        |   | $\vdash$   | 95       | Н        | Н        |          | -        | $\dashv$ | +        | +        | ╀      | 4        |  | 145        |          | 4       | +        | ╀- | ╀- | ⊢                                      | $\vdash$ | Ш        |
|          | 46       | 4        | -        |          |  | Щ  |  | Н               | Н               |          |   | $\vdash \vdash$                                  | 96       | Н        | Ш        | _        | _        | 4        | 4        | +        | ╀      | 4        | ┝─┤  | 146        | _        | +       | +        | 4  | ↓_ | _                                      | Ш        | Щ        |
|          | 47       |          | -        |          |  | _  | $\vdash$   | ⊢               |                 | 4        |   |  | 97       | Щ        | $\dashv$ | _        | 4        | -        | 4        | 4        | +      | 4        | igwdapsilon                                      | 147        | 4        | 4       | 4        | 4  | ╙  | $\vdash$                               | Щ        | Ш        |
|          | 48       |          |          |          |  | $\vdash$   | $\vdash$   | $\vdash$        | $\dashv$        | -1       |   | $\vdash$   | 98       | Н        |          | -        | _        | 4        | -        | 4-       | ╀      | 4        | <del> </del> —↓                                  | 148        | 4        | +       | +        | 4  | ↓_ | $oldsymbol{oldsymbol{oldsymbol{eta}}}$ | Ш        | Щ        |
| -        | 49<br>50 | -        | -        | -        | 4  | _  |  | $\vdash \vdash$ | $\dashv$        | ᅴ        |   |  | 99       | $\vdash$ | -4       | _        | 4        | 4        | 4        | 4-       | +      | 4        | ┝─┤  | 149        | 4        | 4       | 4        | ╄  | ₩  | ┡                                      | Ц        | Щ        |
|          | 20 I     | - 1      | - 1      | _1       |  |  |  | Ш               | ш               |          |   |  | 100      |          |          |          | 1        |          |          | ┸        | L      | J        | لـــــا  | 150        | $\perp$  | $\perp$ | ᆚ        |    | 1  |  | 1_1      | ı l      |